

# Chapter Twenty

## REQUIREMENTS FOR MAJOR PROJECTS

BUREAU OF DESIGN AND ENVIRONMENT MANUAL



**Chapter Twenty**  
**REQUIREMENTS FOR MAJOR PROJECTS**

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## Chapter Twenty

# REQUIREMENTS FOR MAJOR PROJECTS

Subsection (h) of 23 USC 106, "Project approval and oversight," sets forth specific requirements that apply to "Major Projects." As defined in Subsection (h) and associated guidance issued by FHWA, Major Projects include those with a total estimated cost of \$500 million or more that are receiving Federal financial assistance (in any amount), and projects receiving Federal financial assistance (in any amount) with a total cost of less than \$500 million, where the FHWA designates the undertakings as Major Projects. FHWA may choose to apply this designation in situations that include, but are not limited to, where FHWA determines a project requires a substantial portion of a State Transportation Agency's program resources, has a high level of public or congressional interest, is an unusually complex project, or is likely to exceed \$500 million in total cost during the life of the project.

All costs associated with the project from the NEPA phase through final construction must be included in determining the total estimated project cost, regardless of the source of funding. The scope of a project is defined in the Record of Decision (ROD), Finding of No Significant Impact (FONSI) or Categorical Exclusion (CE) document and includes all work associated with implementing the undertaking. On a case-by-case basis, with approval of the FHWA Division Office (which will consult with the FHWA Major Projects Team before making its determination), the scope of work described by the ROD, FONSI or CE can be divided into multiple projects that correspond to operationally independent phases of work, which will be built non-concurrently (i.e., portions of the work described in the environmental document that can be built and function as a viable transportation facility even if the rest of the work described in the environmental document is never built). Identify and describe the operationally independent phases of work in the Final Environmental Impact Statement (FEIS) or Environmental Assessment (EA). If an independent cost estimate review is required, discuss the results in the Draft EIS and/or FEIS.

The requirements described in Subsection (h) for Major Projects include preparation and submittal of the following plans, with annual updates:

1. Project Management Plan. This plan will document the procedures and processes that are in effect to provide timely information to the project decision-makers to effectively manage the scope, costs, schedules, and quality of, and the Federal requirements applicable to, the project and the role of the agency leadership and management in the delivery of the project.
2. Financial Plan. This plan will be based on detailed estimates of the cost to complete the project and will provide for the annual submission of updates that are based on reasonable assumptions of future increases in the cost to complete the project.

The following sections provide guidance for implementing the above requirements on IDOT projects that meet the \$500 million total estimated cost threshold or that FHWA otherwise designates as Major Projects.

## **20-1 PROJECT MANAGEMENT PLAN**

References: FHWA *Major Project Guidance*, January 19, 2007  
FHWA *Project Management Plan Guidance*, February 2007

### **20-1.01 General**

The responsible district will prepare Project Management Plans for IDOT Major Projects. A draft Project Management Plan must be submitted to the FHWA for review prior to approval of the NEPA decision document. The FHWA will provide comments and the district must submit a Project Management Plan for approval within 90 days of the date of the signed NEPA decision document (CE, FONSI or ROD).

For the first Project Management Plan prepared for an IDOT Major Project, the FHWA Major Projects Team must provide concurrence prior to the FHWA Division Office approval. For subsequent Project Management Plans, either the Division or Headquarters Offices may request FHWA Headquarters review and concurrence prior to the Division's approval.

The Project Management Plan is to be a living document in which revisions will be issued as a project progresses, to add, modify, or delete provisions that will result in the most effectively managed project. At a minimum, the Project Management Plan should be revised and approved prior to authorization of Federal-aid funds for right-of-way acquisition and prior to authorization of Federal-aid funds for construction.

### **20-1.02 Purpose**

The Project Management Plan is the guide for implementing a Major Project and documents assumptions and decisions regarding communication, management processes, execution, and overall project control. The ultimate purpose of the Project Management Plan is to clearly define the roles, responsibilities, procedures, and processes that will result in the Major Project being managed so that it is completed:

- on-time;
- within budget;
- with the highest degree of quality;
- in a safe manner for both the individuals working on the project and for the traveling public; and

- in a manner that will maintain the public trust, support, and confidence in the project.

The Project Management Plan addresses all phases of the Major Project's life cycle and ensures the project will be managed holistically and as a continuum; not incrementally as the project progresses. The Project Management Plan establishes the metrics by which the success of the project is defined.

### **20-1.03 Topics**

The following topics form the basic contents for the Project Management Plan. The intent of the following paragraphs is not to establish a prescriptive format. Rather, it is intended to provide a general framework in which modifications can be made to produce a Project Management Plan that will most effectively serve IDOT and FHWA throughout the project continuum.

1. Project Description and Scope of Work. The Project Management Plan should document the complete description of the project and the overall program, along with the history of its development and important project decisions. It also should include a clearly defined project scope statement that includes all the requirements to be executed, verified, and delivered. A clearly defined scope of work will document which items of work have been dedicated in the baseline cost budget and will assist in controlling and minimizing future potential scope increases.

The Project Management Plan should clearly define the project scope of work, including construction, environmental work, utilities, and right-of-way. A map of the defined project can be included for added clarity.

2. Goals and Objectives. The Project Management Plan should document the goals and objectives of the overall project and the degree to which the requirements and commitments of the project will be fulfilled. For example, one commitment may be to complete the project within a certain budget. The extent to which this commitment will be met is a quality measure. Completing the project at 10% under budget would be a possible outcome and would be a more favorable outcome than completing the project at 1% under budget. Quality measurements should cover schedule, budget (including cost containment), quality, safety, scope control, public trust and confidence, and Federal requirements.

The quality requirements for the project should be stated upfront, so that all involved and concerned parties can understand the basic management philosophies that will be incorporated to meet these requirements. The Project Management Plan should be clear and specific on how quality will be measured and should include appropriate targets and tolerances.

3. Project Organizational Chart, Roles and Responsibilities. The project management team should be organized, from a managerial, technical, oversight, and decision-making perspective, to achieve all of the stated project goals and objectives. The Project Management Plan should include an organizational chart for clarity, with a brief

description of roles and responsibilities for each section or individual team. Normally, an executive oversight committee (or steering committee) will be shown at the top of the chart to provide overall project direction. The executive oversight committee would be primarily composed of executive-level FHWA, IDOT, and local officials and should meet on a periodic basis. The day-to-day project management team is normally led by a project manager who would report to and support the executive oversight committee.

This section should define the relationships between public and private stakeholders and their organizational structures. Also, if the Major Project is in multiple States, describe each State's roles and responsibilities.

In addition to technical and functional support teams for right-of-way, utilities, design, construction, project controls (e.g., scheduling, cost, document control), QA/QC, etc., consideration should be given to creating separate teams for media and public information, civil rights, environmental monitoring and review, safety, and security.

The project team must have experienced key personnel dedicated to the success of the Major Project, with the requisite technical, managerial, leadership, and communication skills needed to proficiently perform the required tasks. Project teams that integrate consultants and Department personnel in the project management and functional/support teams can be successful, but the use of consultants must be carefully structured and reviewed to ensure proper oversight. At least one Department manager should be directly responsible and accountable for the project management team and each functional/support team.

4. Project Phases. The planning and project development project can include many phases. The Project Management Plan should include a description of each of the phases for a Major Project to facilitate effective management of day-to-day project activities and to promote understanding by the project management team of the broader context of the project phases and potential influences on the project.
5. Procurement and Contract Management. Document and formalize how procurement and management activities are to be conducted. This section should discuss how procurement decisions are to be made, including selection of contractors and the types of contracts to be used. Consideration should be given to the size and length of contracts as they relate to bonding capacity, the number of likely bids, and other market conditions. It is also important to note that the strategy of using multiple contracts may introduce additional coordination and interface issues among separate contracts.

This section should address how contracts are to be administered and the requirements for performance reporting, payments, claims administration and records management. In addition, it should document the process for contract closeout, including analysis of the results of the contract.

6. Cost, Budget and Schedule. Cost and schedule data are included in the Financial Plan and annual updates (see Section 20-2) required for all Major Projects. The initial Financial Plan is required prior to the first Federal authorization for construction funds.



The Project Management Plan should specifically reference the Financial Plan and annual updates as an integral part of the Project Management Plan and should discuss the process and frequency for validation of cost estimates and schedules. The Project Management Plan should include the current cost and schedule information, broken down into major cost elements and significant schedule milestones. The initial financial arrangements for the project, including any proposed loans and/or bonds also should be discussed. The financing for Major Projects must be consistent with any fiscally constrained plans, Statewide Transportation Improvement Programs (STIPs), Transportation Improvement Programs (TIPs), etc. The Financial Plan annual updates will document any subsequent budget and financing revisions.

Prior to preparation of the initial Financial Plan, the Project Management Plan should have a mechanism in place for providing an annual report updating the project cost estimate.

Independent validations of the cost and schedule at key milestones are important to avoid unexpected cost overruns and project delays. The Project Management Plan should provide for independent validations by an unbiased team that does not have a stake in the outcome of the validation. FHWA will conduct its own independent validations of the cost estimate as appropriate at key milestones throughout the project continuum (e.g., prior to approval of the FEIS or EA and again during preparation of the Initial Financial Plan, which will precede the initial FHWA construction authorization). FHWA also may review project cost estimates any time the Financial Plan annual update shows a significant cost increase, delay, or scope change from the previous annual update. Independent validations conducted by IDOT should be coordinated with FHWA for verification.

7. Project Reporting and Tracking. The Project Management Plan should discuss the project reporting and tracking procedures to be applied. The project reporting and tracking system will be a key element in ensuring the consistency of the project with the budget and schedule to the maximum extent practical, that the project will be completed with the highest degree of quality, and that compliance will be established with all applicable Federal regulations.

The project reporting and tracking system should provide for collecting, assessing and maintaining timely, independent, and accurate project status information and data. It should provide current information on project progress, changes, and issues for use in identifying trends, forecasting project performance, and proactively addressing potential problems.

The need for continuously and accurately reporting cost increases, schedule changes, items of deficient quality and the causes, impacts, and measures to mitigate these issues is paramount for effectively administering the project and protecting the public investment in the project. Any apparent reporting deficiencies or questionable data should be promptly addressed and resolved. IDOT and FHWA must have timely and

complete information on the project status to be able to take appropriate action to effectively address any problems, if necessary.

FHWA recommends monthly reports on project cost, schedule and status and monthly status meetings with the project management team, IDOT and FHWA representatives and representatives of other agencies, as appropriate. The monthly status meetings should include discussion of project costs, schedule, quality issues, compliance with Federal requirements, and other status items in sufficient detail to make all involved parties aware of any significant status issues and actions planned to address any adverse effects.

The following is a sample format for a monthly status report. It is provided as an example and is not intended to be prescriptive. (Refer to the FHWA *Project Management Plan Guidance* for additional detail on the content of each section of the report.)

- a. Executive Summary. The executive summary should provide a clear and concise description of the current project status, including any major issues that impact the project scope, budget, schedule, quality, safety, etc.
- b. Project Activities and Deliverables. The purpose of this section is to highlight (1) project activities and deliverables for the current reporting period (i.e., the previous month) and (2) activities and deliverables planned for the next two reporting periods.
- c. Action Items/Outstanding Issues. This section should identify and track the progress in resolving highly significant or sensitive issues that require action and direction to address.
- d. Project Schedule. This section should include an updated master project schedule reflecting the current status of project activities.
- e. Project Cost. This section should include an updated cost spreadsheet reflecting the current projected cost, compared with the approved budget and the baseline budget.
- f. Project Quality. The purpose of this section is to (1) summarize the QA/QC activities during the reporting period and (2) highlight any significant items of deficient quality identified.
- g. Other Status Reports. IDOT and FHWA may agree that other reports may be beneficial for ensuring project status issues are fully and openly communicated. Examples include reports on contractor safety performance, wrap-up insurance payments and reserves, and/or actual DBE use compared to DBE-use goals.
8. Internal and Stakeholder Communications. In addition to formal project reporting and tracking, internal communications and communications with stakeholders are integral to a successful project. The Project Management Plan should include a discussion

addressing communications between project team members and stakeholders that covers how informal and formal communications will be conducted and managed.

9. Project Management Controls (Scope, Cost, Schedule, Claims, etc.). A project controls team normally helps to manage the scope, total cost, and overall master schedule for the project. The team also assists the project management team to meet the projects schedule and budget objectives. The project controls team also produces project reports that include quantification of delays and cost increases and initiatives being analyzed to address the delays and cost increases. The following are project management controls that should be used on most Major Projects and that should be documented, as appropriate, in the Project Management Plan (Refer to the FHWA *Project Management Plan Guidance* for additional details.):
- a. Risk Management Plan. This plan documents a systematic process to identify, analyze, and respond to project risk throughout all phases of the project.
  - b. Scope Management Plan. This plan documents the philosophy regarding scope management, the process for approving scope changes, and for verifying the planned scope of work is actually completed.
  - c. Scheduling Software. This item describes the scheduling software to be used for the project and the frequency and detailed process for reviewing and validating schedules.
  - d. Cost Tracking Software. This item describes the software to be used to track and report costs for the project and the frequency and detailed process for reviewing and validating cost estimates.
  - e. Project Metrics. This item describes the metrics by which the success of the project is measured (e.g., cost, schedule, public opinion).
  - f. New and Innovative Contracting Strategies. This item discusses management processes for new and innovative procurement strategies to be incorporated in the project (e.g., Design-Build, Public-Private-Partnerships, cost-plus-time bidding, lane rental, bid options).
  - g. Value Engineering Analysis. Refer to Section 11-7.03 for requirements and guidance on value engineering analyses.
  - h. Partnering. This item documents a formalized partnering process to enhance working relationships between the project delivery team and contractors. It should describe the level of organizational involvement and professional facilitation required, including any partnership development and team-building workshops.
  - i. Contractor Outreach Meetings. If contractors are to be consulted during the early design process, this item discusses the level of involvement by contractors and any procurement restrictions on contractors involved in outreach meetings.

- j. Change Order and Extra Work Order Procedures. These are procedures for addressing change orders and extra work orders during project construction that will ensure appropriate review, efficient processing, and consistency with project objectives.
  - k. Claims Management Procedure. This item describes the claims review and management process to be followed in cases of contractor claims. It should document the roles and responsibilities of those reviewing and approving the claims, including legal reviews.
  - l. Other Programs. This item describes how other unique programs (e.g., Owner Controlled Insurance Programs (OCIPs), Transportation Infrastructure Finance and Innovation Act (TIFIA) loan program) are to be managed.
10. Design Quality Assurance/Quality Control (QA/QC). The Project Management Plan should set the general requirements for QA/QC to be used during the design phase. A reference to standard design QA/QC documents may be appropriate, plus any enhanced QA/QC procedures to be incorporated due to the complexity and visibility of the Major Project. FHWA guidance suggests that, at a minimum, the design QA/QC procedures include the following:
- an overall Design QA/QC Plan;
  - design criteria to be adhered to;
  - design criteria specific to the individual project;
  - procedures for preparing and checking individual plans, specifications, estimates, calculations, and other items;
  - procedures for preparing and checking any unique or highly specialized designs;
  - procedures for coordinating work performed by different persons for related tasks to ensure that conflicts, omissions, or errors do not occur between drawings or between drawings and other design documents;
  - procedures for coordinating and obtaining permits from permitting agencies, utility companies, and railroad companies. This should include procedures for ensuring that all permitting, utility, and railroad requirements are incorporated into the design of the project and procedures for coordinating submittals and agency reviews so that the overall project schedule is not delayed;
  - level, frequency, and methods of review of the adequacy of the total project design and methods by which:
    - + all final design documents will be independently reviewed;
    - + verified for constructability, completeness, clarity and accuracy; and

- + back-checked;
  - level and frequency of audit and oversight design reviews (concerning QA/QC and validity of consultant payments) to be performed by IDOT, FHWA, independent consultants, and/or other agencies;
  - procedures for reviewing and checking design drawings and documents required during construction;
  - qualifications for all key design personnel; and
  - documentation and submission procedures to ensure the established design QA/QC procedures have been followed.
11. Construction Quality Assurance/Quality Control (QA/QC). The Project Management Plan should also set the general requirements for QA/QC to be used during the construction phase. A reference to standard construction QA/QC documents may be appropriate, plus any enhanced QA/QC procedures to be incorporated due to the complexity and visibility of the Major Project. FHWA guidance suggests that, at a minimum, the construction QA/QC procedures include the following:
- an overall Construction QA/QC Plan;
  - guidance on:
    - + construction standards to be adhered to for performing construction inspection;
    - + documents to be used that will define materials to be certified, materials to be tested, sampling procedures, and testing procedures; and
    - + recordkeeping and reporting procedures and nonconformance plan;
  - agency or party responsible for QA/QC (i.e., responsibilities of the contractor versus IDOT for sampling, testing, monitoring, and reporting test results);
  - frequency and agency involvement for construction coordination (progress) and/or partnering meetings;
  - procedures for coordinating with permitting agencies, utility companies and railroad companies during construction to ensure all requirements are incorporated into the project so that the overall project schedule is not delayed;
  - level and frequency of inspections to identify and correct any deficiencies in the project construction that do not meet the requirements of the plans, specifications, and other binding documents;

- level and frequency of audit and oversight construction reviews (concerning QA/QC and validity of contractor payments) to be performed by IDOT, FHWA, independent consultants, and/or other agencies;
- qualifications for all key construction personnel; and
- documentation and submission procedures to ensure the established construction QA/QC procedures have been followed.

12. Environmental Monitoring. The final NEPA decision document and other agreements can define the required mitigation for the Major Project. In addition, environmental permits may be obtained during project design that will specify additional requirements to be adhered to during construction. The Project Management Plan should establish the general requirements for ensuring all environmental commitments are included in the design and construction of the project, and that a proactive approach is used for overseeing and inspecting environmental work during construction to help guard against cost overruns and project delays. In addition, many Records of Decision include requirements for environmental compliance actions on an ongoing basis after a facility is open to traffic (e.g., storm water management, wetlands performance). FHWA guidance suggests that for a Major Project with a substantial amount of sensitive environmental issues, environmental monitoring procedures should include some or all of the following:

- an overall Environmental Monitoring Plan to verify that environmental commitments from the NEPA document, environmental permits and other environmental approvals are implemented in accordance with the scope as described;
- roles and responsibilities of the environmental monitoring staff;
- any strategic stationing or positioning of staff members to maintain ongoing contact with resource agencies and a working knowledge of the project's environmental issues to ensure follow-through on all commitments from the FEIS and environmental permits;
- any planned proactive coordination with resource agencies during project design and construction to ensure early and ongoing communication of environmental issues and requirements;
- any fluctuating work schedules among environmental monitoring staff to ensure continuous coverage of key contractor schedules and activities that may involve environmental effects;
- coordination of environmental monitoring staff's daily activities with the project management and construction management teams to monitor and observe critical contractor activities;
- recordkeeping and reporting procedures;

- procedures for addressing noncompliance and violations;
  - permit modification procedures related to construction activities, including strategies for guarding against cost overruns and project delays while still ensuring good environmental stewardship; and
  - post-construction environmental performance for wetlands, storm water, vegetation, wildlife crossings, endangered species, etc.
13. Right-of-Way. This discussion should address policies and processes for appraisals, acquisitions, relocations, demolitions, construction/utility easements, scheduling, and reporting.
14. Safety and Security. This section should define the requirements to be incorporated to ensure the project is conducted in a safe and secure environment for all individuals working on the project. Accident prevention during execution of a Major Project should be a primary concern of all participants and should be a responsibility of all management levels for the project. Safety should be considered an integral part of an efficient and quality project and should never be compromised for the sake of production. FHWA guidance suggests that safety and security procedures include the following:
- safety and health standards;
  - roles and responsibilities of the safety/security staff;
  - requirement for contractors (i.e., prime contractors, subcontractors) to have a Safety Director and an approved safety manual or plan available to all employees;
  - requirement for contractors to hold periodic on-site safety meetings;
  - requirement for contractors to conduct periodic on-site safety inspections;
  - requirement for contractors to provide safety training for all new employees and refresher training for all employees;
  - requirement for contractors to conduct drug screening for all new hires;
  - requirement for contractors to publish daily housekeeping and clean-up procedures;
  - provisions for possible employee sharing of savings from accident prevention;
  - provisions for having first-aid and medical kits readily available;
  - provisions for having a site-security plan, possibly including such items as restricted parking near vulnerable structures, physical barriers (e.g., fences, barricades), coordinated efforts with local law enforcement officials during

heightened threat levels, video surveillance, alarm systems, emergency telephones, etc.;

- provisions for having an emergency preparedness and incident management plan including roles and responsibilities, emergency evacuation procedures, communications, first responder awareness training, and field drills;
- provisions for establishing an employee identification (ID) system;
- provisions for level and frequency of audit and oversight safety/security reviews to be performed by IDOT, FHWA, independent consultants, and/or other agencies; and
- provisions for periodic reporting (normally monthly) on safety and security matters.

In addition, appropriate threat and vulnerability assessments should be made and taken into consideration throughout the project's life cycle, recognizing that transportation elements of a Major Project could have a significant impact on regional safety and security plans.

15. Traffic Management. This section of the Project Management Plan should define the requirements for providing monitoring and oversight of the contractor's day-to-day maintenance of traffic operations, to ensure the project is conducted in the safest and most efficient manner for the traveling public. FHWA guidance suggests traffic management procedures include the following:

- maintenance of traffic standards;
- roles and responsibilities of traffic management staff;
- provisions for reviewing maintenance of traffic plans and proposals at various design reviews for conformance with approved standards and familiarity with traffic phasing, traffic shifts, and lane closures proposed during construction;
- provisions for coordinating with local agencies during design and construction regarding placement of temporary signing and traffic control devices within their jurisdictions;
- provisions for coordinating with local agencies during design and construction regarding traffic restrictions and management for special events;
- provisions for coordinating with all local emergency agencies during design and construction to ensure adequate passage for emergency vehicles through construction zones;
- provisions for coordinating traffic maintenance with multiple contractors to integrate temporary signing and traffic control devices among various contracts;



- provisions for coordinating with contractors concerning specific language to be used on variable message signs during construction;
  - provisions for conducting periodic reviews during construction (including nighttime inspections) for conformance with plans, specifications, and approved standards and to ensure all traffic control devices are functioning properly;
  - provisions for having an incident management plan for crashes occurring within the project limits, including crash prevention strategies, emergency procedures, reporting requirements and mitigation strategies;
  - provisions for coordinating with and assisting the media and public information team and local new media concerning traffic pattern changes, periods of lane closures, traffic delays, availability of alternative routes, work zone crashes, etc.;
  - provisions for level and frequency of audit and oversight traffic management reviews to be performed by IDOT, FHWA, independent consultants, and/or other agencies; and
  - provisions for periodic (normally monthly) traffic management reporting.
16. Project Communications (Media and Public Information). The Project Management Plan should document all external communications planned for the Major Project. A critical objective for all Major Projects is to maintain the trust, support, and confidence of the media and the public throughout the life of the project. A Media and Public Information Plan, that will promote proactive, effective, and responsive project communications, is a key component in meeting this objective. FHWA guidance suggests examples of key strategies that should be incorporated into the plan, including the following:
- establish a public information team or office to be responsible for all media and public information efforts for the project;
  - proactively convey current project status information to the media and the public, including scheduled milestone completion dates; major contracts advertised, awarded or completed, and total cost projections;
  - proactively convey updated commuter and traffic information, including traffic pattern changes, periods of lane closures, traffic delays, work zone crashes, availability of alternative routes, and alternative forms of transportation (including benefits and possible subsidies);
  - proactively convey, to the greatest extent possible, construction impacts to local residents and businesses and measures to be implemented for mitigation of the impacts;
  - provide timely responses to questions and requests for project information from the media and the public; and

- provide information to increase awareness and understanding of the benefits of the project to encourage a sense of ownership and pride in the project for the affected community and other stakeholders.
17. Civil Rights Program. IDOT and FHWA should make a commitment to provide a strong civil rights program for the Major Project. This section of the Project Management Plan should outline the specific goals and requirements related to Disadvantaged Business Enterprises (DBE), Small Business Enterprises (SBE), Equal Employment Opportunity (EEO), and other civil rights programs for contractors, consultants, and the project delivery team. A separate civil rights team or office may be created that would be responsible for administration and oversight of the civil rights program for the project.

Procedures and requirements should be established for periodic (normally monthly) reporting on the civil rights program and for review and audit of the program. Procedures should be defined for prompt handling of negative findings and complaints regarding the program, including the use of appropriate sanctions, if necessary.

The civil rights team/office should interface with the public information team/office to ensure that disadvantaged communities are included in public outreach programs. Consideration should be given to conducting DBE outreach sessions that bring DBEs and prime contractors together in “one-on-one” meetings to discuss large, upcoming contracts. These types of sessions have shown positive results in helping to meet or exceed DBE goals.

18. Closeout Plan. The Project Management Plan should include a Closeout Plan that discusses the requirements for providing a coordinated transition from construction to operations and the roles and responsibilities of various agencies and offices in accomplishing the transition.
19. Project Documentation. The Project Management Plan should include discussion of procedures for project recordkeeping, including definition of the document control and tracking systems, possible use of a Web site for accessing project documents, and provisions for preparing a final report at the end of the project to document final project data and lessons learned.
20. Other Possible Sections. The Project Management Plan also could include sections on:
- human resources management, including management of project teams and their roles and responsibilities, project team performance assessment and other human resource issues; and
  - any other project functions IDOT or FHWA believe would be beneficial to help in meeting the goals and objectives for the Major Project.
21. Appendices. Appendices to the Project Management Plan could include any prior interagency agreements or other applicable documents that would aid users of the plan in understanding prior commitments and previously established roles.

22. Executive Leadership Endorsement. FHWA guidance suggests the executive leadership of IDOT and FHWA endorse the Project Management Plan via a briefing and signature page. Executive leadership endorsement will further the commitment to achieving the project objectives and will officially initiate implementation of the procedures and requirements set forth in the Project Management Plan. The signature page should include language noting that the effectiveness of the Project Management Plan will be continuously evaluated and revised, as appropriate, as the project progresses to provide for the most effective management of the project to meet its defined objectives.



## **20-2 FINANCIAL PLAN**

References: FHWA *Major Project Guidance*, January 19, 2007  
FHWA *Financial Plans Guidance*, January 2007  
FHWA *Major Project Program Cost Estimating Guidance*, January 2007

### **20-2.01 General**

The Initial Financial Plan will provide information on the immediate and longer-term financial implications resulting from project initiation. The annual updates of the Financial Plan should provide information on actual cost, expenditure, and revenue performance in comparison to initial estimates and updated estimates of future years' obligations and expenditures. The annual updates will provide information on cost and revenue trends, current and potential funding shortfalls, and the financial adjustments necessary to ensure completion of the project. The Financial Plan and its subsequent annual updates will also provide assurance that the project's impact on the IDOT Transportation Capital Improvement Program has been addressed. The projected uses of funding for the project must meet the fiscal constraint requirements for the IDOT planning process.

### **20-2.02 Purpose**

A Financial Plan is a comprehensive document that reflects the project's cost estimate and revenue structure and provides reasonable assurance that there will be sufficient financial resources available to implement and complete the project as planned. A Financial Plan provides a description of how a project will be implemented over time by identifying project costs and the financial resources to be used in meeting those costs. The plan should clearly explain the assumptions about cost and revenue upon which the plan is based. In addition, the annual updates to the plan will enable decision makers to track the financial progress of the project over time by highlighting significant deviations from the Initial Financial Plan and the subsequent annual updates explaining the actions taken to adjust for those deviations. In essence, the Financial Plan process is a subset of the overall Project Management Plan that is required for each Major Project.

### **20-2.03 Timing**

The Initial Financial Plan should be prepared as early in the project development process as practical. The cost estimate developed during the environmental process is used to determine if the action is subject to the Major Project requirements. If the estimated cost is over \$500 million, a cost estimate review is completed no later than the FEIS. Accordingly, a Financial Plan could be submitted to the FHWA Division Office at the time of issuance of the Record of Decision if all other elements of the Financial Plan have been completed. The Initial Financial Plan for a Major Project also could be submitted and approved by FHWA prior to right-of-way acquisition but, in all cases, should be submitted and approved by FHWA before authorization of Federal-aid funding for mainline construction. On a design-build project, the Initial Financial

Plan should be approved prior to FHWA concurrence in the award of the design-build contract. The FHWA Division Office will approve all Financial Plan documents, even when the FHWA Major Projects Team is involved in the review and concurrence process. In these cases, the FHWA Associate Administrator for Infrastructure will provide formal concurrence to the Division Administrator.

Financial Plans must be updated annually. The Initial Financial Plan should indicate the annual reporting date for updates to the plan. IDOT has the option of determining the effective date of the annual update submission and may choose a date one year after approval of the Initial Financial Plan or, more commonly, at the end of the IDOT Fiscal Year or end of the Federal Fiscal Year. The annual updates must reflect changes in total and remaining project cost and/or available funding. The annual updates are to be submitted to FHWA for approval no more than 90 days after the effective date established in the Initial Financial Plan.

The scope of the annual updates should be sufficient to identify and resolve any cost and/or funding (including cash flow) changes that have occurred since submission of the previous plan or update. This would include any changes in project scope that impact the cost estimate and/or completion schedule for the project. In the event of major changes in cost or funding, the updates may need to revise the cost and funding figures for future years in addition to those for the current year.

#### **20-2.04    Methodology**

Initial Financial Plans and annual updates should be prepared in accordance with the guidelines provided in this Chapter and recognized financial reporting standards (e.g., *Guide for Prospective Financial Information* of the American Institute of Public Accountants included as Attachment A in the FHWA *Financial Plans Guidance*). In unique or unusual circumstances, alternative formats may be acceptable with prior concurrence of the FHWA Division Office and the FHWA Major Projects Team.

#### **20-2.05    IDOT Certification**

The Initial Financial Plan and each annual update should include a certification, signed by the IDOT Secretary prior to submission of the plans to the FHWA Division Office, indicating that the content is “accurate and reasonable to the best of my knowledge and belief.” (See Attachment B of the FHWA *Financial Plans Guidance* for a sample Letter of Certification.)

#### **20-2.06    FHWA Review and Approval**

The Initial Financial Plan and annual updates are submitted to the FHWA Division Office for review and acceptance. The FHWA Division Office will coordinate with the FHWA Major Projects Team for concurrent review of, and concurrence in, all Initial Financial Plans. Either the FHWA Division Office or FHWA Headquarters may request involvement of the Major Projects Team in a concurrent review process for annual updates. Acceptance and approval

will be based on the review performed by FHWA. The review will evaluate such items as the reasonableness of the cost projections, the viability of the identified funding sources, including whether they are contained in the fiscally constrained STIP/TIP/Long Range Plan, and the likelihood the funding commitments will provide sufficient resources to complete the project as planned. The FHWA review and determination of acceptability should be completed within 30 days from the date the FHWA Division Office receives the document. When the FHWA Major Projects Team is part of the review process, a concurrence memorandum from the Associate Administrator for Infrastructure will be prepared and sent to the Division Office prior to approval of the document. In all cases, the approval of the Initial Financial Plan and annual updates will be by the FHWA Division Administrator.

### **20-2.07 Content**

The Initial Financial Plan should consist of at least five main sections, including:

- Cost Estimate,
- Implementation Plan,
- Financing and Revenues,
- Cash Flow, and
- Risk Identification and Mitigation Factors.

The following paragraphs provide a detailed explanation of the content for each of the required sections:

1. Cost Estimate. The purpose of this section is to present the current estimate of the total cost of the project and the remaining cost-to-complete. The total project cost can be considered the equivalent of the project purchase price. This should include all costs and the value of all resources necessary to perform the preliminary engineering, including the cost of NEPA and other environmental documentation, right-of-way, environmental mitigation, construction, project management, Transportation Demand Management and Transportation System Management, public outreach, and costs associated with external third parties (e.g., utility adjustments, railroad relocations. All costs should be calculated in accordance with standard accounting methods and generally do not include the costs of acquiring revenue (taxation, mortgage interest payments, etc.). Refer to the FHWA *Major Project Program Cost Estimating Guidance*, available on the FHWA Web site, for further information on estimating costs for Major Projects. The total cost of the project should be presented as the sum of the costs for each major segment and element of the project. This section should include a narrative describing the assumptions used in developing the cost estimates. All costs should be presented in “year of expenditure” dollars (i.e., dollars that are adjusted for inflation) because it is important for the Financial Plan to be consistent in presenting both costs and revenues in comparable dollars.
2. Implementation Plan. This portion of the Initial Financial Plan should present the schedule for completing the project. It should describe the methodology used to develop

the schedule and include discussion of assumptions for future inflation, cost escalation, etc. These factors are key considerations in developing the schedule because estimated expenditures for project implementation must be covered by projected revenues. This section should discuss the likelihood of occurrence, and the possible impacts on the implementation schedule, for a wide array of potential changes in costs and/or revenues. For example, cost increases might result from unforeseen environmental and subsurface conditions, inflation, litigation, technological innovations, contractor problems, overtime costs needed to meet the project schedule, changes in government rules and regulations affecting the project, value engineering savings, etc. Changes in revenues could result from lower than expected toll or tax collections, or a diversion of project funds to other projects.

3. Financing and Revenues. The plan should describe all funding sources for the project and should clearly describe these funds either as committed or as anticipated amounts, with an evaluation of the likelihood of the anticipated amounts actually being realized. The discussion should note where the funding sources are identified in the fiscally constrained IDOT STIP/TIP/Long Range Plan.

Federal funds should be described by funding category under existing legislation and as potential amounts under future legislation. Projected expenditures of Federal-aid funds should be constrained by anticipated annual limitations on Federal-aid fund obligations.

If special funding techniques (e.g., advance construction) are to be used, the plan should include estimated annual conversion amounts.

Any portions of the project that are likely to be funded with other than Federal-aid funds should be discussed. The amount and sources of revenue for the non-Federal share should be clearly identified. If the availability of these funds is limited to certain parts or phases of the project, those limits should be explained. The Financial Plan should never assume there will be future discretionary allocation made for the Major Project. If and when discretionary allocations are enacted, they may be included in the project revenue in the next annual update.

The plan should address the potential for unanticipated changes in expected revenue and the impact on the project. Changes might include delays or decreases in receipt of project funding, reductions in user fees earmarked for the project, changes in government rules affecting the project, etc.

4. Cash Flow. The key objective of this section is to demonstrate that revenue will be available to permit annual project fund obligations and expenditures as presented in the Implementation Plan, consistent with the STIP/TIP/Long Range Plan.

The plan should include an annual schedule of cash needs versus available cash to meet those needs. This will demonstrate that the project schedule for payments to construction contractors and others can be met. The cash flow analysis should extend through the point at which all project expenditures have been met and all Advance Construction conversions have been completed.



5. Risk Identification and Mitigation Factors. This section should discuss the risk analysis for the project. It should identify risks to project completion and revenue sufficiency and describe potential mitigation measures for addressing those risks. The following are examples of issues that should be addressed:
- a. Capital Program Impacts. Major Projects will significantly impact the IDOT transportation project capital program, thus the Financial Plan for these projects should be coordinated with the Statewide Long Range Transportation Plan and the Statewide Transportation Improvement Program. This coordination will evaluate the impact to the transportation capital program during the period of analysis covered by the Financial Plan.
  - b. Cost Containment. This section should describe all special project cost containment strategies being used or planned for later use. These might include design-to-estimated cost for individual project elements (i.e., limit design so as not to exceed a target construction cost), design-build, use of cost control teams, management cost control strategies, vendor participation via warranties or guarantees, value engineering, incentive and disincentive clauses, etc.
  - c. Responsibilities. The plan should describe the major responsibilities, financial and otherwise, of the various parties involved in the project and should contain evidence of agreements or commitments.
  - d. Special/Unique Arrangements. The plan should describe any special or unique agreements, laws, rules, or regulations in addition to NEPA and Title 23 that apply to the Major Project. These could include Federal or State project-enabling legislation, financial agreements and covenants, accounting system reports and audits, etc.
  - e. Cost Monitoring. If pertinent, the plan should discuss the liability for subsequent operation and maintenance costs as project segments come on-line. On some Major Projects, the opening of certain segments to traffic could require significant operational resources (e.g., a tunnel or complex traffic management system) while other elements of the project are not complete and still require significant construction expenditures.

When Financial Plans call for funding mechanisms other than existing revenue streams to meet the non-Federal revenue needs or to meet cash flow demands, the likelihood of the mechanisms being implemented must be thoroughly analyzed. This would apply to mechanisms such as new taxes, future toll increases not currently authorized, contributions from third parties, and short-term or long-term borrowing. The analysis must address whether authority exists to pursue the mechanisms or must be granted through legislation or other means. In evaluating this portion of the Financial Plan, the Federal focus will be on the likelihood of realizing the non-Federal revenues, not on the choice of mechanism.

The Initial Financial Plan will identify the schedule for the future annual updates. It may be advantageous to time the submittal of the annual updates to coincide with the beginning of either the State fiscal year or the Federal fiscal year, rather than the anniversary of the approval of the Initial Financial Plan. If the annual updates are submitted on a schedule that does not correspond to the beginning of the Federal fiscal year, it still will be permissible to display Federal-aid obligations and expenditures on a Federal fiscal year basis.

#### **20-2.08    Annual Updates**

Each annual update of the Financial Plan should be presented in both total cost (actual cost to date) and cost-to-complete estimates (shown in year-of-expenditure dollars). These updates should use the same project elements of segment breakpoints as used in the Initial Financial Plan to present the costs and revenues. Any significant change in the total project cost or revenue since the last estimate should be clearly presented and should include a discussion of the major reasons for the significant changes.

In the annual updates, each of the five main sections from the Initial Financial Plan should be updated to reflect any changes that have occurred since approval of the initial plan. The following subjects should be addressed and incorporated in the appropriate sections of the annual updates:

1.    Cost and Revenue History. The presentation should clearly summarize significant cost and/or revenue changes from the Initial Financial Plan estimates and discuss the reason(s) for the changes. Any identified or potential funding shortfall should be discussed in detail, along with the steps that have been taken, or that will be available, if needed, to address the shortfall(s). As appropriate, the annual updates should discuss mitigating measures that increase project funding and/or reduce project costs, including changes in project scope and design undertaken specifically in response to revenue shortfall. Significant changes in project scope also should be discussed and their impact on project costs, both to date and in the future, should be explained. Where appropriate, annual updates should track project milestones and compare initial cost and revenue estimates to the actual costs and revenues at the milestone points.
2.    Cost and Revenue Trends. This discussion should clearly identify the trends that have impacted project costs and revenues in the past year(s) and the probable reasons for these trends. This may be as simple as identifying a change in the anticipated rate of inflation, the availability of materials, the cost of supplies, or the wages paid to project personnel; or as complicated as assessing changes in the competitive arena that have impacted construction bid prices. For each of the trends identified, the annual updates should discuss the implications of the trends for the remainder of the project and should explain any adjustments in the Financial Plan necessary to respond to those trends.
3.    Summary of Significant Cost Reductions. If any changes in the project have reduced the cost by at least \$10 million, the changes should be discussed individually. The discussion should include the original cost estimate, the reduced actual or projected cost, and a brief explanation of how and/or why the reduction was achieved. These

changes should be grouped by element and include any scope changes made to the project.

4. Summary of Significant Cost Increases. If any items have increased the cost of the project by at least \$10 million, the items should be discussed individually. The discussion should include the original cost estimate, the increased actual or projected cost, and a brief explanation of why the increase was necessary. Those increases in cost should be grouped by element and/or changes to the project scope.



**20-3 REQUIREMENTS FOR OTHER THAN MAJOR PROJECTS**

References: FHWA *Financial Plans Guidance*, January 2007

Subsection (i) of 23 USC 106, "Project approval and oversight," sets forth requirements for preparation of an annual Financial Plan for "Other Projects," which are projects with an estimated total cost of \$100 million up to \$500 million.

In accordance with FHWA guidance implementing Subsection (i), the responsible district must prepare a Financial Plan and annual updates for projects with an estimated total cost of \$100 million up to \$500 million. The estimated total cost will be based on the full scope of the project for the limits defined by the environmental process or for the limits that are considered operationally independent.

The content of the Financial Plan and annual updates should address the same sections as those for Major Projects and should be consistent with the guidance in Section 20-2. It is anticipated that the level of detail will be more straightforward for these plans. Also, optional reporting formats for presenting information on multiple IDOT projects of this type will be considered on a case-by-case basis. FHWA will not approve these Financial Plans, but they will be subject to FHWA review to ensure they were completed in accordance with Title 23 requirements for content and timeliness.

For these projects, the Initial Financial Plan may be developed and completed at the earliest feasible point in the project development process. However, it should be finalized prior to construction contract authorization and obligation of Federal funds for construction under the design/bid/build process and prior to contract award for design/build projects.

